

## Appendix C. Implementation

### C.1 Overview

Implementation of the comprehensive conservation plan (CCP) would require increased funding, which would be sought from a variety of sources. This plan would depend on additional Congressional allocations, partnerships, and grants. There are no guarantees that additional Federal funds would be made available to implement any of these projects. Other sources of funds would need to be obtained (both public and private). Activities and projects identified would be implemented as funds become available.

Many of the infrastructure and facility projects (i.e., Refuge roads) would be eligible for funding through construction or Federal Lands Highway Program funds.

The CCP proposes several projects to be implemented over the next 15 years. All of these projects are included in the Refuge Management Information System (Refuge Operational Needs System [RONS] or Maintenance Management System [MMS]), which is used to request funding from Congress. Currently, a large backlog of maintenance needs exists on Deer Flat National Wildlife Refuge (Deer Flat NWR or the Refuge). An attempt at reducing this backlog needs to be made and is included here in the analysis of funding needs. The RONS documents proposed new projects to implement the CCP to meet the Refuge's goals and objectives and legal mandates.

Annual revenue sharing payments would continue to Canyon, Payette, Owyhee, and Washington Counties in Idaho, and Malheur County in Oregon. At this time, no expansions are planned through the purchase of inholdings or through an expanded Refuge boundary.

Monitoring activities would be conducted on a percentage of all new and existing projects and activities to document wildlife populations and changes across time, habitat conditions, and responses to management practices. Actual monitoring and evaluation procedures would be detailed in step-down management plans.

### C.2 Costs to Implement CCP

The following sections detail both one-time and recurring costs for various projects. One-time costs reflect the initial costs associated with a project, such as the purchase of equipment, contracting services, construction, and the like. Recurring costs reflect the future operational and maintenance costs associated with the project. Costs have been summarized by their association with either public use programs, or wildlife and habitat management.

#### C.2.1 One-time and Recurring Costs Common to All Alternatives

Some projects, programs, and maintenance would occur under all alternatives. These costs are already covered by the current Refuge budget and are included in the following tables. The current funding that is received by the Refuge was used as a baseline to start from for all alternatives. Some of the programs and projects paid for by this funding are listed below. Differences between alternatives for new one-time and recurring costs can be found in Sections C.2.2 and C.2.3 respectively.

The current budget for nonstaff costs is approximately \$204,700. Examples of projects, programs, and maintenance that are covered by this budget include the following:

- Current maintenance of existing trails
- Current maintenance of existing observation facilities
- Current maintenance of existing buildings
- Permitting for bass tournaments
- Current hunting programs on Lake Lowell and Snake River Islands Units (including youth waterfowl hunt)
- Maintenance of existing signage
- Maintenance of the Lower Dam Recreation Area (if partnership with Canyon County continues)
- Winter wildlife closures of Gotts Point, Lake Lowell, and the Lower Dam Recreation Area.
- Current wildlife and administrative closures on the southeast end, the northwest end, and around the shop complex
- Seasonal closures around current eagle and osprey nests
- Partnership with Idaho Department of Fish and Game for carp removal
- Invasive species control at current acreage
- One volunteer recognition event per year
- Current volunteer projects
- Current events
- Utilities for existing facilities

Some programs, projects, and maintenance that are currently paid for by the operational budget of the Refuge would be reduced to increase alternative programs without an increase in cost. In some instances, the alternatives would show a savings from what is currently spent.

**Environmental Education versus Interpretation.** In Alternatives 2 and 3, on-site interpretive programs would be emphasized over traditional environmental education (EE) programs. These interpretive programs could include guided walks, on-water kayak/canoe trips, and guided walks at night or into closed areas. In these programs, Refuge staff and volunteers would aim to interact with visitors at high-use access points to increase awareness of the Refuge and its wildlife and habitats. In order to provide an increase in interpretive programs, the EE program (especially from April 15 through September 30) would need to be reduced. Scout Days, day camps, off-site programs, and the on-site Discover Wildlife Journeys program may be reduced or restructured in order to allow enough staff and volunteer time to provide for increase on-site interpretation. By shifting focus from EE to interpretation, no extra cost is anticipated for the increase in interpretive programs.

The following descriptions summarize the costs that would be required to accomplish each alternative and area above and beyond the current base operations budget.

### **C.2.2 New One-time Costs Related to Public Use**

One-time costs are project costs that have a startup cost associated with them, such as purchasing a new vehicle for wildlife and habitat monitoring or designing and installing an interpretive sign. Some are full project costs for those projects that can be completed in three years or less. One-time costs can include the cost of temporary or term salary associated with a short-term project. Salary for new

positions and operational costs are reflected in operational or recurring costs. Funds for one-time costs would be sought through increases in Refuge base funding, special project funds, grants, and the like. The majority of new one-time costs are associated with the upgrade and enhancement of facilities, signage, and programs for the visiting public.

**Boardwalk.** A trail on the south side of the Refuge was suggested by several members of the public during the scoping phase of the CCP's development. Any ground-level trail would be inundated by irrigation water for much of the winter, spring, and fall, which would cause major maintenance issues and likely result in the trail being unavailable to Refuge visitors. Because of these issues, any trail in the riparian zone on the south side of the Refuge would need to be elevated. Cost projections were made based on Region 1 engineering cost estimates and previously constructed boardwalks. Due to the projected cost for the 2-mile boardwalk between Parking Lots 1 and 3, it is not proposed in the Preferred Alternative (Alternative 2). Instead, the trail concept would be investigated further, under Alternative 2, to determine if a lower cost option is available.

**Table C-1. One-time Costs for Boardwalk Construction (\$ in thousands)**

New Trails	Alternative 1 (Status Quo)		Alternative 2 (Preferred)		Alternative 3		Alternative 4		Priority
	Miles of Trail	Cost	Miles of Trail	Cost	Miles of Trail	Cost	Miles of Trail	Cost	
Boardwalk	-	-	-	-	2	\$5,848	-	-	L
<b>Total Cost for Boardwalk Construction</b>		-		-		<b>\$5,848</b>		-	

**New Trails and Signage.** Because the status quo alternative takes into account public use at its current trajectory, some trail upgrades would need to occur even under this alternative. There are currently no trail heads or maps designating trails. This has lead to confusion over the distinction between trails and firebreaks. Visitors currently use a firebreak by the Refuge entrance as a trail, but other firebreaks were not meant to be used as trails. In order to eliminate this confusion, the firebreak that stretches from the entrance parking area to the observation blind would be turned into a trail even under the status quo alternative. Signage would also be upgraded to ensure that users know when they are on a designated trail and what regulations exist. Because of the multiple-use nature of all trails in Alternative 1, signs would also be needed to address right-of-way and expected behavior for different types of uses. Although no new alterations would be made to increase access for nonwildlife-dependent users, alterations to the current horse walk-through would need to be made to ensure safety of riders. Confusion over on- and off-trail uses has existed for many years. Although the last compatibility determination requires on-trail travel, most visitors are unaware of this regulation. Trail use regulations differ across alternatives. Costs associated with a varying number of regulatory signage for trail use would also be needed under all alternatives. Costs for both interpretive and regulation signs have been accounted for.

Changes to public use within the hunt areas, as well as a current need to improve safety along the Lake Lowell Unit boundary, would also require new signs in the hunt area. These signs would remind hunters not to fire over or toward the Refuge boundary, and in some alternatives remind both hunters and other users to be aware of each other.

In an attempt to address scoping comments that took issue with pet feces on the trails, the Refuge would require visitors walking pets to pick up their pet's feces under Alternative 2. Given the current trajectory of use by visitors with pets, and the complaints that the Refuge has already received, the

Refuge would supply feces removal bags under Alternatives 1 and 2. Because pets are allowed in more areas under Alternative 1, more bag dispensers would be needed.

An overview of the costs for new trails and signage can be found in Table C-2.

**Table C-2. New One-time Costs for New Trails and Signage (\$ in thousands)**

New Trails	Alternative 1 (Status Quo)		Alternative 2 (Preferred)		Alternative 3		Alternative 4		Priority
	Miles of Trail	Cost	Miles of Trail	Cost	Miles of Trail	Cost	Miles of Trail	Cost	
Ground-level trails	0.63	\$37	4.5	\$397	2	\$359	1.5	\$234	M
Signs for trails and boardwalk		\$24		\$29		\$50		\$27	H
Alterations to allow dogs and horses		\$2		\$1		-		-	H
Hunting area signs		\$1		\$1		\$1		\$1	H
Multiuse trail signs		\$16		\$8		-		-	H
<b>Total Cost for Trails and Signs</b>		<b>\$80</b>		<b>\$436</b>		<b>\$410</b>		<b>\$262</b>	

**Dock and Blinds.** In order to provide additional opportunities for fishing, wildlife observation, and photography, new docks and blinds would be installed at the Refuge in Alternatives 2 through 4. During the scoping period, commenters requested additional access to the shoreline for these types of activities. Because the Refuge currently does not offer waterfowl hunting opportunities that are accessible to people with physical disabilities, an ADA-accessible hunting blind would be installed under Alternatives 1, 2, and 4. In Alternative 3, the dock associated with the boardwalk at Parking Lot 1 would be used as an ADA-accessible hunting blind during the waterfowl hunting season. An overview of the number of docks and blinds, as well as the associated costs by alternative, can be found in Table C-3.

**Table C-3. New One-time Costs for New Docks and Blinds (\$ in thousands)**

New Docks and Blinds	Alternative 1 (Status Quo)		Alternative 2 (Preferred)		Alternative 3		Alternative 4		Priority
	#	Cost	#	Cost	#	Cost	#	Cost	
Docks	0	-	2	\$45	4	\$89	2	\$45	M
Blinds and signage	0	-	2	\$123	2	\$122	1	\$60	L
Accessible hunting dock	1	\$25	1	\$25	Accounted for in docks cost		1	\$25	H
<b>Total for Docks and Blinds</b>		<b>\$25</b>		<b>\$193</b>		<b>\$211</b>		<b>\$130</b>	

**Kiosks.** During Many visitors to Lake Lowell do not know that they are visiting a national wildlife refuge. In an attempt to address this concern, the Refuge would install kiosks at high-use areas of the Lake Lowell Unit and add one additional kiosk at a boat ramp along the Snake River. Both kiosk construction and interpretive signage were accounted for in the cost analysis (see Table C-4).

**Table C-4. New One-time Costs for New Kiosks and Associated Signage (\$ in thousands)**

New Kiosks	Alternative 1 (Status Quo)		Alternative 2 (Preferred)		Alternative 3		Alternative 4		Priority
	#	Cost	#	Cost	#	Cost	#	Cost	
Kiosks for access points at Lake Lowell and Snake River Islands Units	0	-	5	\$207	5	\$ 207	5	\$ 207	M
Signs for new kiosks	0	-	42	\$55	42	\$55	42	\$55	M
<b>Total for Kiosks</b>		-		<b>\$262</b>		<b>\$262</b>		<b>\$262</b>	

**Environmental Education (EE) and Interpretation Facilities.** The Refuge currently uses the Environmental Education Building at the Lower Dam Recreation Area to provide opportunities for self-service environmental education activities for groups. Scout groups are the most frequent users of this facility. During a recent facilities condition assessment, regional Service staff identified cracking in the exterior walls of both the Visitor Center and the Environmental Education Building. Regional staff suggested that the Environmental Education Building be tested for structural soundness and updated as needed. In Alternatives 2 through 4, this building would be removed or renovated to create a visitor contact station to support the increased interpretive programs at the Lower Dam Recreation Area. Therefore, an estimated cost for testing and rehabilitation of the Environmental Education Building is included in Alternative 1 and not in the other alternatives.

Comments during the scoping process identified the lack of visitor knowledge of the Refuge. In order to address this issue, a small visitor contact station would be established at the Lower Dam Recreation Area. Providing volunteer and staff contact at this high-use area would increase the ability of the Refuge to provide information on its purpose and the importance of its wildlife and habitats. The contact station should help increase the enjoyment of visitors by providing information about recreational opportunities around the Refuge. This contact station could also act as a base of operations for the roving interpreters and would double as a fee station under Alternative 3.

Covered learning facilities would be constructed under Alternatives 2 through 4. These structures would provide covered areas to gather school children during EE programs. Currently, children have no cover from weather during the outdoor portions of their field trips. Since field trips are scheduled mostly in the spring and fall, weather can reach extremes of intense sunshine and pouring rain. In an attempt to give children a dynamic opportunity to experience nature, the Refuge would install a nature play area under Alternatives 2 and 3. The cost of this area includes design. See Table C-5 for analysis of the future of environmental education and interpretation facilities across alternatives.

**Table C-5. New One-time Costs for EE and Interpretation Facilities (\$ in thousands)**

EE and Interpretation Facilities	Alternative 1 (Status Quo)	Alternative 2 (Preferred)	Alternative 3	Alternative 4	Priority
	Cost	Cost	Cost	Cost	
2 covered learning facilities	-	\$136	\$136	\$136	L
Structural evaluation of Visitor Center	\$25	\$25	\$25	\$25	H
Update/rehabilitate Visitor Center	\$425	\$425	\$425	\$425	M
Structural evaluation and update/rehab of Environmental Education Building	\$174	-	-	-	H
Visitor contact station at Lower Dam Recreation Area	-	\$480	\$480	\$480	M
Nature play area	-	\$40	\$40	-	M
<b>Total EE and Interpretation Facilities</b>	<b>\$624</b>	<b>\$1,106</b>	<b>\$1,106</b>	<b>\$1,066</b>	

**Other Facilities.** Several comments were received requesting improved bathroom facilities on the Refuge. Two new facilities have been suggested in Alternatives 2 and 3. The Lower Dam Recreation Area is in need of renovation. It currently is partially paved, and that pavement is in disrepair. Parking and access for boat launches, buildings, and beaches are extremely restricted on busy weekends. A new site plan would also be created in all alternatives to improve functionality, traffic flow, and safety at the Lower Dam Recreation Area. Until the site plan is completed, the cost of renovation of the Lower Dam Recreation Area is unknown. At the bare minimum, the beach parking area and the road leading to it would need to be rehabilitated under any alternative that is selected.

**Table C-6. New One-time Costs for Other Facilities (\$ in thousands)**

Other New Facilities	Alternative 1 (Status Quo)	Alternative 2 (Preferred)	Alternative 3	Alternative 4	Priority
	Cost	Cost	Cost	Cost	
1 comfort station and 1 vault toilet	-	\$208	\$208	-	L
Lower Dam Recreation Area redesign site plan	\$40	\$40	\$40	\$40	H
Rehabilitation of beach access/parking	\$50	\$50	\$50	\$50	M
<b>Total Other New Facilities</b>	<b>\$90</b>	<b>\$298</b>	<b>\$298</b>	<b>\$90</b>	

**Interpretive and Educational Projects.** Changes to the general brochure would be required under all alternatives. It is anticipated that a new brochure would need to be created under all alternatives with changes needed to maps and text. If the old brochure can be reprinted with modifications under any of the alternatives, the cost may be reduced.

**Table C-7. New One-time Costs for Interpretive and Educational Projects (\$ in thousands)**

Interpretive/ Educational Projects	Alternative 1 (Status Quo)	Alternative 2 (Preferred)	Alternative 3	Alternative 4	Priority
	Cost	Cost	Cost	Cost	
Wildlife webcam	-	\$10	\$10	\$10	L
Refuge video	-	\$30	\$30	\$30	L
General brochure	\$3	\$3	\$3	\$3	H
<b>Total for Projects</b>	<b>\$3</b>	<b>\$43</b>	<b>\$43</b>	<b>\$43</b>	

**Fees.** The upfront costs for a fee program include fee deposition containers (i.e., iron rangers) and fee collection envelopes. The Refuge considered providing an optional fee reduction program in Alternative 3. This program would consist of training about the Refuge and its wildlife. Participants would need to take and pass a post-training assessment to be provided a discounted entrance fee. Start-up costs for the fee reduction program would include computers and creation of the training and post-training assessment.

**Table C-8. New One-time Costs for Fee Program (\$ in thousands)**

Fees	Alternative 1 (Status Quo)	Alternative 2 (Preferred)	Alternative 3	Alternative 4	Priority
	Cost	Cost	Cost	Cost	
Entrance fee	-	-	\$22	-	L
Boat launch fee	-	-	\$9	\$9	L
Fee reduction program	-	-	\$8	-	L
<b>Total for Fees</b>	<b>-</b>	<b>-</b>	<b>\$39</b>	<b>\$9</b>	

**Wildlife Disturbance Reduction Signs.** No-wake zones, closed areas, and/or seasonally closed areas are used to differing degrees to reduce disturbance to wildlife and habitats in every alternative. Signs providing a boundary of the zone or area, as well as information about why there is a restriction to access would need to be provided. All of the seasonal closures at Lake Lowell in Alternatives 3 and 4 are already accounted for in the buoys required for the closed areas. Given that the goose-nesting closure on the islands would continue, and that island signage is limited at this time, a cost associated with continuing the current closure is represented under Alternative 1. Table C-9 shows the costs associated with providing such signage under each alternative.

**Table C-9. New One-time Costs for Wildlife Disturbance Reduction Signs (\$ in thousands)**

Signs	Alternative 1 (Status Quo)	Alternative 2 (Preferred)	Alternative 3	Alternative 4	Priority
	Cost	Cost	Cost	Cost	
Seasonal nesting closures at Lake Lowell Unit	-	\$1	-	-	H
Seasonal nesting closures on Snake River Islands Unit	\$5	\$11	\$11	\$11	H
Wintering goose closure on Leavitt Tract	-	-	\$1	\$1	H
<b>Total For Signs</b>	<b>\$5</b>	<b>\$12</b>	<b>\$12</b>	<b>\$12</b>	

**Wildlife Disturbance Reduction Buoys.** The Refuge and Canyon County Sheriff's Office currently deploy approximately 90 to 95 buoys in Lake Lowell to demarcate no-wake zones, closed areas, and swimming areas. In the action alternatives, these buoys would be reconfigured, and in some instances fewer buoys would be needed. Since the buoy replacements needed for the status quo alternative are accounted for in the base operations budget, some alternatives would require fewer buoys and therefore represent a savings in this area. Table C-10 displays the reduction in cost or additional cost required to meet requirements of the Service Sign Manual under each alternative.

**Table C-10. New One-time Costs for Wildlife Disturbance Reduction Buoys (\$ in thousands)**

Wildlife Disturbance Reduction Buoys	Alternative 1 (Status Quo)	Alternative 2 (Preferred)	Alternative 3	Alternative 4	Priority
	Cost	Cost	Cost	Cost	
Permanent no-wake zones, closed areas, and swimming areas	-	\$4	-	-	H
Seasonally closed areas	-	\$1	-	-	H
<b>Total for Buoys</b>	-	<b>\$5</b>	-	-	

**Law Enforcement and Safety.** Many comments were provided to the Refuge about visitors not following regulations. This issue would also be addressed through costs discussed in the staffing section, but it is important to look at technologies that may also reduce the likelihood of illegal activity. Remote video cameras and electronic gates may allow the Refuge to decrease illegal activity, increase the ability of law enforcement personnel to catch those engaged in illegal activity, and provide unobstructed use of the Refuge during daylight hours. There is a history of illegal activity on the Refuge (see Chapter 5), and these activities are expected to continue into the future and perhaps even increase as the population surrounding the Refuge grows. Because of current and potential future illegal activities, the cost of technological solutions can be found under all alternatives. Because many of the illegal activities that occur in the uplands are related to nonwildlife-dependent activities (e.g., dog walking, partying), no cameras were factored into

Alternative 4 because no nonwildlife-dependent activities would be allowed. The cost of electronic gates in Alternative 4 would also be less because Gotts Point would remain closed to vehicles.

**Table C-11. New One-time Costs for Safety and Law Enforcement Improvements (\$ in thousands)**

Improved Safety and Law Enforcement	Alternative 1 (Status Quo)	Alternative 2 (Preferred)	Alternative 3	Alternative 4	Priority
	Cost	Cost	Cost	Cost	
Cameras	\$2	\$3	\$3	-	L
Electronic gates	\$25	\$225	\$225	\$200	H
<b>Total for Safety</b>	<b>\$27</b>	<b>\$228</b>	<b>\$228</b>	<b>\$200</b>	

**Research and Monitoring Related to Public Use.** There are two different types of research and monitoring programs that are related to public use. The first provides feedback on the quality of public use opportunities, and the second studies whether or not our public use programs are compatible with the purpose of the Refuge. As was pointed out in many of the comments received during scoping for the CCP, Deer Flat NWR does not have on-site research showing the interaction of public use programs and wildlife. In order to remedy this lack and test whether our public use programs under each alternative can be provided without substantially impacting wildlife and habitat, disturbance studies must be conducted. Because we would need this information for the next CCP (scheduled to be completed in 15 years), these studies would be completed regardless of the alternative selected. Quality of public use programs is related to the program itself and the ways in which users impact each other. Many studies would not have large one-time costs associated with them and would be listed in the staffing needs section. The studies listed in Table C-12 are those that would be contracted to outside entities in the creation of the study protocols or the completion of the study itself.

**Table C-12. New One-time Costs for Public Use Surveys and Research (\$ in thousands)**

Public Use Survey and Research Needs	Alternative 1 (Status Quo)	Alternative 2 (Preferred)	Alternative 3	Alternative 4	Priority
	Cost	Cost	Cost	Cost	
Study to assess disturbance to grebes, shorebirds, herons and landbirds at Lake Lowell (2-year study)	\$140	\$140	\$140	\$140	H
Quality of wildlife-dependent public uses	\$75-\$80	\$75-\$80	\$75-\$80	\$75-\$80	M
<b>Total for Research and Monitoring</b>	<b>\$215-\$220</b>	<b>\$215-\$220</b>	<b>\$215-\$220</b>	<b>\$215-\$220</b>	

Table C-13 summarizes the one-time costs that are needed to provide for public uses at Deer Flat NWR.

**Table C-13. Summary of New One-time Costs Related to Public Use (\$ in thousands)**

	Alternative 1 (Status Quo)	Alternative 2 (Preferred)	Alternative 3	Alternative 4
<b>Providing Recreation While Minimizing Impacts to Wildlife and Habitats</b>				
Buoys	-	\$5	-	-
Signs	\$5	\$12	\$12	\$12
<b>Subtotal</b>	<b>\$5</b>	<b>\$17</b>	<b>\$12</b>	<b>\$12</b>
<b>Public Use Enhancements</b>				
Boardwalk	-	-	\$5,848	-
Trails and signs	\$80	\$436	\$410	\$262
Docks and blinds	\$25	\$193	\$211	\$130



	Alternative 1 (Status Quo)	Alternative 2 (Preferred)	Alternative 3	Alternative 4
Kiosks	-	\$262	\$262	\$262
Environmental education and interpretation facilities	\$624	\$1,106	\$1,106	\$1,066
Other new facilities	\$90	\$298	\$298	\$90
Environmental education and interpretation projects	\$3	\$43	\$43	\$43
<b>Subtotal</b>	<b>\$822</b>	<b>\$2,338</b>	<b>\$8,178</b>	<b>\$1,853</b>
<b>Establish a Fee Program</b>				
Fee collection	-	-	\$39	\$9
<b>Subtotal</b>	<b>\$0</b>	<b>\$0</b>	<b>\$39</b>	<b>\$9</b>
<b>Enhance Safety and Law Enforcement</b>				
Technology	\$27	\$228	\$228	\$200
<b>Subtotal</b>	<b>\$27</b>	<b>\$228</b>	<b>\$228</b>	<b>\$200</b>
<b>Studies, Research, and Monitoring Related to Public Uses</b>				
Human-wildlife interaction	\$140	\$140	\$140	\$140
Quality of recreation	\$75-\$80	\$75-\$80	\$75-\$80	\$75-\$80
<b>Subtotal</b>	<b>\$215-\$220</b>	<b>\$215-\$220</b>	<b>\$215-\$220</b>	<b>\$215-\$220</b>
<b>Total Public-use-related One-time Costs</b>	<b>\$1,069-\$1,074</b>	<b>\$2,798-\$2,803</b>	<b>\$8,672-\$8,677</b>	<b>\$2,289-\$2,294</b>

### C.2.3 New One-time Costs for Wildlife and Habitat Management

Habitat management can be achieved in a variety of ways, which makes estimating costs for individual projects difficult before a habitat management plan has been created. For example, the treatment of invasive species can be accomplished chemically (with herbicides), mechanically (e.g., mowing, disking, chipping), through the use of fire or goats, or by hand. Each of these different treatments requires different equipment and staffing to achieve. Because of the variety of ways that management can be accomplished, the costs listed in all of the tables below are estimates that would be refined as projects are planned and implemented.

**Mudflats.** Additional areas of mudflats would be created adjacent to current mudflats by removing vegetation removal through disking, burning, and or other mechanical control methods. Mudflats would be enhanced by using a disc to create scours that would hold pools of water. The projects would occur within the life of the CCP.

**Table C-14. New One-time Costs for Mudflat-related Projects (\$ in thousands)**

Project	Alternative 1 (Status Quo)		Alternative 2 (Preferred)		Alternative 3		Alternative 4		Priority
	Acres	Cost	Acres	Cost	Acres	Cost	Acres	Cost	
Create and enhance mudflats	-	-	5-25	\$1-\$6	5-25	\$1-\$6	5-25	\$1-\$6	L
<b>Total</b>	<b>-</b>	<b>-</b>	<b>5-25</b>	<b>\$1-\$6</b>	<b>5-25</b>	<b>\$1-\$6</b>	<b>5-25</b>	<b>\$1-\$6</b>	

**Riparian Areas at Lake Lowell.** The fragmentation of the riparian zone would be reduced by relocating firebreaks so they coincide with Board of Control drainage and canals. The riparian areas would also be enhanced and maintained through the reduction of nondesirable plants; reduction of hazardous fuels; planting of desirable trees, shrubs and grasses (to replace nondesirables that are removed); and enhancements in nesting habitat. Because these enhancement goals can be attained through numerous means (e.g., prescribed fire, herbicide, mechanical removal), the actual costs of

riparian enhancement would differ depending on the tools that are used. The estimates below reflect some of the most expensive methods in order to capture the highest estimated costs. The projects would occur throughout the life of the CCP.

**Table C-15. New One-time Costs for Lake Lowell Riparian-related Projects (\$ in thousands)**

Project	Alternative 1 (Status Quo)		Alternative 2 (Preferred)		Alternative 3		Alternative 4		Priority
	Acres	Cost	Acres	Cost	Acres	Cost	Acres	Cost	
Remove undesirable vegetation	-	-	1,200	\$210	1,200	\$210	1,200	\$210	H
Plant desirable vegetation	-	-	10-15	\$5-\$7	10-15	\$5-\$7	10-15	\$5-\$7	H
Relocate fire breaks	-	-	100	\$18	100	\$18	100	\$18	M
<b>Total</b>		-		<b>\$233- \$235</b>		<b>\$233- \$235</b>		<b>\$233- \$235</b>	

**Riparian Areas at Snake River Islands.** The size of the islands within the Snake River Islands Unit varies from 1 acre to 40 acres. Because the prioritization of island enhancement and protection would occur after the CCP is completed, an average size of 20 acres was used to create the cost estimates in Table C-16. The same theory was used for fencing of islands and adjacent lands. An average shoreline size was established and used to create the cost estimates. The projects would occur over the life of the CCP.

**Table C-16. New One-time Costs for Snake River Islands Riparian-related Projects (\$ in thousands)**

Project	Alternative 1 (Status Quo)		Alternative 2 (Preferred)		Alternative 3		Alternative 4		Priority
	#of Islands	Cost	# of Islands	Cost	# of Islands	Cost	# of Islands	Cost	
Remove undesirable vegetation and plant desirable vegetation	-	-	2-10	\$60- \$300	2-10	\$60- \$300	2-10	\$60- \$300	H
Reduce cattle trespass	-	-	2-10	\$6-\$30	2-10	\$6-\$30	2-10	\$6-\$30	M
<b>Total</b>	-	-	<b>2-10</b>	<b>\$66- \$330</b>	<b>2-10</b>	<b>\$66- \$330</b>	<b>2-10</b>	<b>\$66- \$330</b>	

**Wetlands.** Emergent wetlands would be enhanced through removal of undesirable vegetation, planting of desirable vegetation, and recontouring. Because some of these enhancement goals can be attained through numerous means (e.g., prescribed fire, herbicide, mechanical removal), the actual costs of enhancement would differ depending on the tools that are utilized. The estimates below used some of the most expensive methods in order to capture the highest estimated costs. The projects would occur throughout the life of the CCP.

**Table C-17. New One-time Costs for Wetlands-related Projects (\$ in thousands)**

Project	Alternative 1 (Status Quo)		Alternative 2 (Preferred)		Alternative 3		Alternative 4		Priority
	Acres	Cost	Acres	Cost	Acres	Cost	Acres	Cost	
Remove undesirable vegetation	-	-	82	\$18	82	\$18	82	\$18	M
Plant desirable vegetation	-	-	82	\$25	82	\$25	82	\$25	M
Re-contour wetlands	-	-	82	\$7	82	\$7	82	\$7	L
<b>Total</b>	-	-	<b>82</b>	<b>\$50</b>	<b>82</b>	<b>\$50</b>	<b>82</b>	<b>\$50</b>	

**Shrub-steppe Habitat at Lake Lowell.** Shrub-steppe habitat would be enhanced through removal of undesirable vegetation, planting of desirable vegetation, and removal of unnecessary internal firebreaks. Because some of these enhancement goals can be attained through numerous means (e.g., prescribed fire, herbicide, mechanical removal), the actual costs of enhancement would differ depending on the tools that are utilized. The estimates below used some of the most expensive methods in order to capture the highest estimated costs. The projects would occur throughout the life of the CCP.

**Table C-18. New One-time Costs for Lake Lowell Shrub-Steppe-related Projects (\$ in thousands)**

Project	Alternative 1 (Status Quo)		Alternative 2 (Preferred)		Alternative 3		Alternative 4		Priority
	Acres	Cost	Acres	Cost	Acres	Cost	Acres	Cost	
Remove undesirable vegetation	-	-	300	\$38	300	\$38	300	\$38	H
Plant desirable vegetation	-	-	150	\$36	150	\$36	150	\$36	H
Remove unnecessary internal firebreaks	-	-	4	\$1	4	\$1	4	\$1	M
<b>Total</b>	-	-		<b>\$75</b>		<b>\$75</b>		<b>\$75</b>	

**Shrub-steppe Habitat at Snake River Islands.** The size of the islands within the Snake River Islands Unit varies from 1 acre to 40 acres. Because the prioritization of island enhancement and protection would occur after the CCP is completed, an average size of 20 acres was used to create the cost estimates in Table C-19. The projects would occur over the life of the CCP.

Shrub-steppe habitat would be enhanced through removal of undesirable vegetation, planting of desirable vegetation, and removal of unnecessary internal firebreaks. Because some of these enhancement goals can be attained through numerous means (e.g., prescribed fire, herbicide, mechanical removal), the actual costs of enhancement would differ depending on the tools that are utilized. The estimates below used some of the most expensive methods in order to capture the highest estimated costs. The projects would occur throughout the life of the CCP.

**Table C-19. New One-time Costs for Snake River Islands Shrub-steppe-related Projects (\$ in thousands)**

Project	Alternative 1 (Status Quo)		Alternative 2 (Preferred)		Alternative 3		Alternative 4		Priority
	Acres	Cost	Acres	Cost	Acres	Cost	Acres	Cost	
Remove undesirable vegetation	-	-	40-200	\$14-\$70	40-200	\$14-\$70	40-200	\$14-\$70	H
Plant desirable vegetation	-	-	40-200	\$60-\$300	40-200	\$60-\$300	40-200	\$60-\$300	H
<b>Total</b>	-	-	<b>40-200</b>	<b>\$74-\$370</b>	<b>40-200</b>	<b>\$74-\$370</b>	<b>40-200</b>	<b>\$74-\$370</b>	

**Agriculture.** Enhancement of the agricultural program would occur through installation of a new well, creating better growing conditions.

**Table C-20. New One-time Costs for Agricultural Projects (\$ in thousands)**

Project	Alternative 1 (Status Quo)	Alternative 2 (Preferred)	Alternative 3	Alternative 4	Priority
	Cost	Cost	Cost	Cost	
Install well	-	\$80-\$100	\$80-\$100	\$80-\$100	L
<b>Total</b>	-	<b>\$80-\$100</b>	<b>\$80-\$100</b>	<b>\$80-\$100</b>	

**Grasslands.** Maintenance of the goose browse in the Leavitt Tract would occur through updates to the irrigation system and re-establishment of goose pasture. Efficient and effective irrigation is also an important part of the cooperative land management program at Lake Lowell Unit. In order to provide an adequate amount of water to the Refuge's managed grasslands the irrigation system would need to be improved.

**Table C-21. New One-time Costs for Grasslands Projects (\$ in thousands)**

Project	Alternative 1 (Status Quo)		Alternative 2 (Preferred)		Alternative 3		Alternative 4		Priority
	Acres	Cost	Acres	Cost	Acres	Cost	Acres	Cost	
Update irrigation		-		\$12		\$12		\$12	M
Interseed grass	-	-	80	\$48	80	\$48	80	\$48	M
<b>Total</b>		-		<b>\$60</b>		<b>\$60</b>		<b>\$60</b>	

**Research, Surveys, and Assessments of Wildlife and Habitat.** Table C-22 provides costs for research, surveys, and assessments that would be accomplished through the use of contractors. It is important to understand the baseline structure of habitats and wildlife so that future changes can be monitored.

**Table C-22. New One-time Costs for Surveys and Research (\$ in thousands)**

Public Use Survey and Research Needs	Alternative 1 (Status Quo)	Alternative 2 (Preferred)	Alternative 3	Alternative 4	Priority
	Cost	Cost	Cost	Cost	
Prioritization of Refuge islands for wildlife value	-	\$30	\$30	\$30	H
Analyze historic biological data to assess long-term population trends	-	\$30	\$30	\$30	M
Contaminants study of DDT in Lake Lowell	-	\$250	\$250	\$250	M
Contaminants investigation of	-	\$200	\$200	\$200	M

Public Use Survey and Research Needs	Alternative 1 (Status Quo)	Alternative 2 (Preferred)	Alternative 3	Alternative 4	Priority
	Cost	Cost	Cost	Cost	
Leavitt Tract					
Mule deer study at Lake Lowell Unit (3-year vegetation and population study)	-	\$60	\$60	\$60	M
Mule deer study at Snake River Islands Unit (3-year vegetation and population study)	-	\$80	\$80	\$80	M
Cheatgrass removal study (4 years of study and monitoring)	-	\$110	\$110	\$110	H
Soil survey of shrub-steppe and GIS layer	-	\$40	\$40	\$40	M
Surveys of wetland topography	-	\$20	\$20	\$20	M
<b>Total for Research and Monitoring</b>	-	<b>\$820</b>	<b>\$820</b>	<b>\$820</b>	

Table C-23 summarizes the one-time costs that are needed to provide for public uses at Deer Flat NWR.

**Table C-23. Summary of New One-time Costs Related to Wildlife and Habitat Management (\$ in thousands)**

	Alternative 1 (Status Quo)	Alternative 2 (Preferred)	Alternative 3	Alternative 4
<b>Enhance Habitat</b>				
Mudflats	-	\$1-6	\$1-6	\$1-6
Riparian at Lake Lowell	-	\$233-\$235	\$233-\$235	\$233-\$235
Riparian at Snake River Islands	-	\$66-\$330	\$66-\$330	\$66-\$330
Wetlands	-	\$50	\$50	\$50
Shrub-steppe at Lake Lowell	-	\$75	\$75	\$75
Shrub-steppe at Snake River Islands	-	\$74-\$370	\$74-\$370	\$74-\$370
Agriculture	-	\$80-\$100	\$80-\$100	\$80-\$100
Grasslands	-	\$60	\$60	\$60
<b>Subtotal</b>	-	<b>\$639-\$1,226</b>	<b>\$639-\$1,226</b>	<b>\$639-\$1,226</b>
<b>Studies, Research, and Monitoring</b>				
Wildlife and habitat research	-	\$820	\$820	\$820
<b>Subtotal</b>	-	<b>\$820</b>	<b>\$820</b>	<b>\$820</b>
<b>Total Wildlife and Habitat Management One-time Costs</b>	-	<b>\$1,459-\$2,046</b>	<b>\$1,459-\$2,046</b>	<b>\$1,459-\$2,046</b>

## C.2.4 Summary of One-time Costs

**Table C-24. Summary of One-time Costs (\$ in thousands)**

Cost Category	Alternative 1 (Status Quo)	Alternative 2 (Preferred)	Alternative 3	Alternative 4
	Cost Per Year	Cost Per Year	Cost Per Year	Cost Per Year
Public use	\$1,069-\$1,074	\$2,798-\$2,803	\$8,672-\$8,677	\$2,289-\$2,294
Wildlife and habitat	-	\$1,459-\$2,046	\$1,459-\$2,046	\$1,459-\$2,046
<b>Total One-time Costs</b>	<b>\$1,069-\$1,074</b>	<b>\$4,257-\$4,849</b>	<b>\$10,131-\$10,723</b>	<b>\$3,748-\$4,340</b>

### C.2.5 Nonstaff Recurring Costs Related to Public Use

**Facilities: Trails, Boardwalk, Kiosks, Blinds, Environmental Education and Interpretation Facilities, and Other Facilities (costs for maintaining docks are discussed under Buoys, Docks, and Signs).** With new trails, signs, and other public use facilities comes an increase in associated maintenance and operations. The following are estimated maintenance costs per year for the new trails. In Fiscal Year (FY) 2011, approximately \$28,000 was spent on maintaining Refuge buildings. It is estimated that \$10,000 per year is spent to maintain the current trail system (including herbicide treatment, grading, and adding gravel), the observation blind, and platforms. Special maintenance projects in 2011 on the Kingfisher Trail and the observation blind cost the Refuge an additional \$10,000. These expenditures were used as a baseline to estimate new funding needs for the maintenance of new facilities proposed under each alternative. If the visitor contact station replaces the Environmental Education Building, the cost of building maintenance should not rise. Because the maintenance costs for a wooden boardwalk may exceed those for a gravel trail, extra funding was added to Alternative 3.

The Refuge currently pays for waste removal in the Gotts Point and Upper Dam Recreation Area vault toilets. These vault toilets are currently only pumped, on average, once every two years. Visitors have complained about the condition of restrooms, which may be alleviated, in part, by monthly pumping. Therefore, monthly pumping, from April through September, has been factored into all alternatives. Canyon County Parks, Recreation, and Waterways maintains the vault toilets in the Lower Dam Recreation Area. If Canyon County decided not to continue maintenance at the Lower Dam Recreation Area, the cost for restroom maintenance would rise.

**Table C-25. New Recurring Costs for Facilities (\$ in thousands)**

Facilities	Timing	Alternative 1 (Status Quo)	Alternative 2 (Preferred)	Alternative 3	Alternative 4	Priority
		Cost	Cost	Cost	Cost	
Utilities	Every year	-	\$2	\$2	\$2	M
Restroom maintenance	Every year	\$2	\$3	\$3	\$2	L
Other facilities maintenance	Every year	\$1	\$4	\$5	\$3	M
Dog feces disposal bags	Every year	\$1	\$1	-	-	H
<b>Total</b>	<b>Every year</b>	<b>\$4</b>	<b>\$10</b>	<b>\$10</b>	<b>\$7</b>	

**Buoys, Docks and Signs.** Due to vandalism, theft, and normal wear and tear, a percentage of the Refuge's signs and buoys would have to be replaced annually. It was estimated that 25 percent of the regulation and directional signs would need to be replaced yearly and that half of the interpretive signs would need to be replaced during the life of the CCP. According to the Canyon County Sheriff's office, between \$10,000 and \$20,000 per year is spent on maintaining the current boat launching docks and buoys on the Refuge. The additional funds needed to maintain new buoys and docks were estimated based on an average annual maintenance cost of \$15,000 for the six docks that are currently maintained by Canyon County. Two other docks that are currently maintained by the Refuge are already maintained with base funding. The funding needed to maintain the current docks would increase if Canyon County discontinued the maintenance of the current boating docks. Table C-26 captures this cost.

**Table C-26. New Recurring Costs for Buoys, Docks, and Signs (\$ in thousands)**

Buoys, Docks, and Signs	Timing	Alternative 1 (Status Quo)	Alternative 2 (Preferred)	Alternative 3	Alternative 4	Priority
		Cost	Cost	Cost	Cost	
Buoy and dock maintenance	Every year	-	\$7	\$10	\$7	H
Replace 25% of regulatory and directional signs	Every year	\$2	\$5	\$3	\$3	H
Replace 50% of interpretive signs	Every 10 years	\$19	\$56	\$52	\$41	M
<b>Total</b>	<b>Every year</b>	<b>\$2</b>	<b>\$12</b>	<b>\$13</b>	<b>\$10</b>	
<b>Total</b>	<b>Every 10 years</b>	<b>\$19</b>	<b>\$56</b>	<b>\$52</b>	<b>\$41</b>	

**Environmental Education and Interpretation Projects.** Many of the recurring costs are above and beyond the current base budget even though they are happening currently, because they have been funded by grants. These grants cannot be counted on, so these costs must be accounted for in recurring costs to continue the upkeep of the program or project. Costs include but are not restricted to printing of materials, equipment, volunteer awards, scholarships for buses, and presenter costs.

**Table C-27. Recurring Costs for New Environmental Education and Interpretation Projects (\$ in thousands)**

Project	Timing	Alternative 1 (Status Quo)	Alternative 2 (Preferred)	Alternative 3	Alternative 4	Priority
		Cost	Cost	Cost	Cost	
Teach the teacher	Every year	-	\$1	\$1	\$1	M
EE program	Every year	\$4	\$4	\$4	\$4	M
Volunteers	Every year	-	\$1	\$1	-	H
On-site events	Every year	-	\$2	\$2	\$1	H
Webcam	Every year	\$1	\$1	\$1	\$1	L
Brochure reprint	Every 3 years	\$3	\$3	\$3	\$3	H
<b>Total</b>	<b>Every year</b>	<b>\$5</b>	<b>\$9</b>	<b>\$9</b>	<b>\$7</b>	
<b>Total</b>	<b>Every 3 years</b>	<b>\$3</b>	<b>\$3</b>	<b>\$3</b>	<b>\$3</b>	

**Fees.** In order to collect fees at multiple entrances, envelopes and self-service fee stations must be provided. Once in place, the fee stations (i.e., iron rangers) require little maintenance or upkeep. However, envelopes are disposable items, and a new envelope must be used for each visit. The cost of printing envelopes for approximately 200,000 visitors is displayed in Table C-28.

**Table C-28. Recurring Costs for New Fee Programs (\$ in thousands)**

Fees	Timing	Alternative 1 (Status Quo)	Alternative 2 (Preferred)	Alternative 3	Alternative 4	Priority
		Cost	Cost	Cost	Cost	
Fee envelopes	Every year	-	-	\$45	\$13	L
<b>Total</b>	<b>Every year</b>	<b>-</b>	<b>-</b>	<b>\$45</b>	<b>\$13</b>	

**Controlled Waterfowl Hunt.** Depending on the type of controlled hunt employed, the program could have staffing or materials costs associated with it. In order to create a fee system that would not depend on a staff member, a self-check system would be employed. If the hunt program used a check-in/out system, then envelopes and iron rangers would be used, much like the fee program explained above.

**Table C-29. New Recurring Costs for Hunting Programs (\$ in thousands)**

Controlled Hunt	Timing	Alternative 1 (Status Quo)	Alternative 2 (Preferred)	Alternative 3	Alternative 4	Priority
		Cost	Cost	Cost	Cost	
Envelopes	Every 3 years	-	-	\$1	-	L
<b>Total</b>	<b>Every 3 years</b>	-	-	<b>\$1</b>	-	

Table C-30 summarizes the recurring costs that are needed to provide for public uses at Deer Flat NWR.

**Table C-30. Summary of New Recurring Costs Related to Public Use (\$ in thousands)**

Public Use Recurring Costs	Timing	Alternative 1 (Status Quo)	Alternative 2 (Preferred)	Alternative 3	Alternative 4
		Cost	Cost	Cost	Cost
Buildings and trail maintenance	Every year	\$4	\$10	\$10	\$7
Signs, docks and buoy, maintenance	Every year	\$2	\$12	\$13	\$10
Environmental education, volunteers, and interpretation	Every year	\$5	\$9	\$9	\$7
Fees	Every year	-	-	\$45	\$13
Brochures	Every 3 years	\$3	\$3	\$3	\$3
Controlled hunt	Every 3 years	-	-	\$1	-
Interpretive signs	Every 10 years	\$19	\$56	\$52	\$41
<b>Total</b>	<b>Every year</b>	<b>\$11</b>	<b>\$31</b>	<b>\$77</b>	<b>\$37</b>
<b>Total</b>	<b>Every 3 years</b>	<b>\$3</b>	<b>\$3</b>	<b>\$4</b>	<b>\$3</b>
<b>Total</b>	<b>Every 10 years</b>	<b>\$19</b>	<b>\$56</b>	<b>\$52</b>	<b>\$41</b>

## C.2.6 Nonstaff Recurring Costs Related to Wildlife and Habitat Management

As explained in Section C.2.3 New One-time Costs for Wildlife and Habitat Management, habitat management can be achieved in a variety of ways, which makes estimating costs difficult before a habitat management plan has been created. The costs listed below are estimates based on the most expensive method of treatment. Because the most expensive method of treatment was used to estimate cost, the actual cost of implementation should be lower. These costs would be refined as projects are planned and implemented.

**Emergent Beds.** Enhancement of emergent habitat would occur through soil disturbance, invasive species control, and the seeding/planting of moist soil plants. These efforts are above and beyond invasive species control that is currently occurring and accounted for in Section C.2.1 One-time and Recurring Costs Common to All Alternatives.

**Table C-31. New Recurring Costs for Emergent-bed Habitat Projects (\$ in thousands)**

Project	Timing	Alternative 1 (Status Quo)		Alternative 2 (Preferred)		Alternative 3		Alternative 4		Priority
		Acres	Cost	Acres	Cost	Acres	Cost	Acres	Cost	
Maintain and enhance emergent beds	Every year	-	-	20	\$4	20	\$4	20	\$4	H
<b>Total</b>	<b>Every year</b>	-	-	<b>20</b>	<b>\$4</b>	<b>20</b>	<b>\$4</b>	<b>20</b>	<b>\$4</b>	



**Shrub-steppe Habitat at Lake Lowell.** Shrub-steppe habitat would be maintained through removal of undesirable vegetation in areas that have been restored. The costs estimated below would not be realized until after an area has been rehabilitated. Cost estimates are based on having to use herbicide to control nondesirable species on 25 percent of the total restored acreage each year. The per-year estimate would be excessive, because the entire 300 acres would not be restored within the first year.

**Table C-32. New Recurring Costs for Lake Lowell Shrub-steppe Habitat Projects (\$ in thousands)**

Project	Timing	Alternative 1 (Status Quo)		Alternative 2 (Preferred)		Alternative 3		Alternative 4		Priority
		Acres	Cost	Acres	Cost	Acres	Cost	Acres	Cost	
Remove undesirable vegetation	Every year	-	-	75	\$23	75	\$23	75	\$23	H
<b>Total</b>	<b>Every year</b>	-	-	<b>75</b>	<b>\$23</b>	<b>75</b>	<b>\$23</b>	<b>75</b>	<b>\$23</b>	

**Shrub-steppe Habitat at Snake River Islands.** Shrub-steppe habitat would be maintained through removal of undesirable vegetation in areas that have been restored. The costs estimated below would not be realized until after an area has been rehabilitated. Cost estimates are based on having to use herbicide to control nondesirable species on 25 percent of the total restored acreage each year. The per-year estimate would be excessive, because the entire 40 to 200 acres would not be restored within the first year. Costs per acre are more expensive for shrub-steppe maintenance on the islands because of the logistical challenges in bringing herbicide to the islands.

**Table C-33. New Recurring Costs for Snake River Islands Shrub-steppe Habitat Projects (\$ in thousands)**

Project	Timing	Alternative 1 (Status Quo)		Alternative 2 (Preferred)		Alternative 3		Alternative 4		Priority
		Acres	Cost	Acres	Cost	Acres	Cost	Acres	Cost	
Remove undesirable vegetation	Every year	-	-	10-50	\$4-\$18	10-50	\$4-\$18	10-50	\$4-\$18	H
<b>Total</b>	<b>Every year</b>	-	-	<b>10-50</b>	<b>\$4-\$18</b>	<b>10-50</b>	<b>\$4-\$18</b>	<b>10-50</b>	<b>\$4-\$18</b>	

**Agriculture.** Enhancement of the agricultural program would include annual planting of crops along the shoreline of the lake. Because the cost of the new plantings would vary depending on the type of crop that is planted, the most expensive crops were used for the estimate in order to capture the highest estimated cost.

**Table C-34. New Recurring Costs for Agricultural Projects (\$ in thousands)**

Project	Timing	Alternative 1 (Status Quo)		Alternative 2 (Preferred)		Alternative 3		Alternative 4		Priority
		Acres	Cost	Acres	Cost	Acres	Cost	Acres	Cost	
Plant crops on shoreline	Every year	-	-	25	\$7	25	\$7	25	\$7	L
<b>Total</b>	<b>Every year</b>	-	-	<b>25</b>	<b>\$7</b>	<b>25</b>	<b>\$7</b>	<b>25</b>	<b>\$7</b>	

**Grasslands.** Maintenance of desirable short grasses for goose browse in the Leavitt Tract would occur through the use of prescribed fire, herbicide, and/or mechanical control. The actual costs of maintenance would differ depending on the tools that are utilized. The estimates below used some of the most expensive methods in order to capture the highest estimated costs. The projects would occur throughout the life of the CCP.

**Table C-35. New Recurring Costs for Grasslands Projects (\$ in thousands)**

Project	Timing	Alternative 1 (Status Quo)		Alternative 2 (Preferred)		Alternative 3		Alternative 4		Priority
		Acres	Cost	Acres	Cost	Acres	Cost	Acres	Cost	
Manage short grasses	Every year	-	-	80	\$12	80	\$12	80	\$12	M
<b>Total</b>	<b>Every year</b>	-	-	<b>80</b>	<b>\$12</b>	<b>80</b>	<b>\$12</b>	<b>80</b>	<b>\$12</b>	

Table C-36 summarizes the recurring costs that are needed to implement new wildlife and habitat maintenance projects at Deer Flat NWR.

**Table C-36. Summary of New Recurring Costs Related to Wildlife and Habitat Management (\$ in thousands)**

Projects Maintaining Wildlife Habitats	Timing	Alternative 1 (Status Quo)	Alternative 2 (Preferred)	Alternative 3	Alternative 4
		Cost	Cost	Cost	Cost
Emergent beds	Every year	-	\$4	\$4	\$4
Shrub-steppe at Lake Lowell Unit	Every year	-	\$23	\$23	\$23
Shrub-steppe at Snake River Islands Unit	Every year	-	\$4-\$18	\$4-\$18	\$4-\$18
Agriculture	Every year	-	\$7	\$7	\$7
Grasslands	Every year	-	\$12	\$12	\$12
<b>Total</b>	<b>Every year</b>	-	<b>\$50-\$64</b>	<b>\$50-\$64</b>	<b>\$50-\$64</b>

## C.2.7 Summary of All Recurring Costs

**Table C-37. Summary of Recurring Costs (\$ in thousands)**

Recurring Costs	Timing	Alternative 1 (Status Quo)	Alternative 2 (Preferred)	Alternative 3	Alternative 4
		Cost	Cost	Cost	Cost
Public use	Every year	\$11	\$31	\$77	\$37
Public use	Every 3 years	\$3	\$3	\$4	\$3
Public use	Every 10 years	\$19	\$56	\$52	\$41
Wildlife and habitat	Every year	-	\$50-\$64	\$50-\$64	\$50-\$64
<b>Total</b>	<b>Every year</b>	<b>\$11</b>	<b>\$81-\$95</b>	<b>\$127-\$141</b>	<b>\$87-\$101</b>
<b>Total</b>	<b>Every 3 years</b>	<b>\$3</b>	<b>\$3</b>	<b>\$4</b>	<b>\$3</b>
<b>Total</b>	<b>Every 10 years</b>	<b>\$19</b>	<b>\$56</b>	<b>\$52</b>	<b>\$41</b>

## C.2.8 Staffing Costs

**Table C-38. Current Permanent Staffing (\$ in thousands)**

Staff: Refuge Operations	Status	Series, Position, and Grade
Refuge Manager	PFT	GS-0485-12
Assistant Refuge Manager	PFT	GS-0485-11
Visitor Services Manager	PFT	GS-0025-11
Wildlife Biologist	PFT	GS-0486-09
Maintenance Worker	PFT	WG-4749-08
Administrative Assistant	PFT	WG-0303-06
<b>Total Positions and Salary</b>	<b>6</b>	<b>\$448</b>

**Table C-39. Current Temporary Staffing (\$ in thousands)**

<b>Staff: Refuge Operations</b>	<b>Status</b>	<b>Series, Position, and Grade</b>
Office Aide	STEP	GS-0303-4
Youth Conservation Corps Leader	TEMP	GS-0186-05
Youth Conservation Corps	TEMP	Minimum wage
Youth Conservation Corps	TEMP	Minimum wage
Youth Conservation Corps	TEMP	Minimum wage
Youth Conservation Corps	TEMP	Minimum wage
<b>Total Positions and Salary</b>	<b>6</b>	<b>\$47</b>

**Table C-40. Current Operations Funded Interns (\$ in thousands)**

<b>Interns</b>	<b>Status</b>	<b>Series, Position, and Grade</b>
Environmental Education Specialist	TERM	Intern
Volunteer Coordinator	TERM	Intern
Biological Science Technician	SEASONAL	Intern
<b>Total Positions and Salary</b>	<b>3</b>	<b>\$30</b>

**Table C-41. Additional Staff Needed to Implement CCP (\$ in thousands)**

<b>Staff: Refuge Operations</b>	<b>Status</b>	<b>Series, Position, and Grade</b>
*Biological Science Technician	PFT	GS-0400-07
*Environmental Education Specialist	PFT	GS-1750-07
*Volunteer Coordinator	PFT	GS-0025-07
Law Enforcement Officer	PFT	GS-0025-09
<b>Total Positions and Salary</b>	<b>4</b>	<b>\$217</b>

\*If these positions were funded, the current interns would not be necessary.

### C.3 Step-down Plans

The CCP is one of several plans necessary for Refuge management. The CCP provides guidance in the form of goals, objectives, and strategies for several Refuge program areas but may lack some of the specifics needed for implementation. Step-down management plans would be developed for individual program areas within approximately five years after the CCP's completion. All step-down plans require appropriate National Environmental Policy Act (NEPA) compliance, and implementation may require additional permits. Step-down plans for the Refuge follow. Project-specific plans, with appropriate NEPA compliance, may be prepared outside of these step-down plans.

**Table C-42. Status of Step-down Plans**

<b>Step-down Plans</b>	<b>Status</b>
Safety Plan	Revised 2012
Integrated Pest Management Plan	Created 2012, included as CCP Appendix G
Fire Management Plan	Revised 2012, included as CCP Appendix K
Habitat Management Plan	Within 2 years of CCP completion
Visitor Services Plan	Within 2 years of CCP completion
Fisheries Management Plan	Within 5 years of CCP completion
Inventory and Monitoring Plan	Within 2 years of CCP completion
Hunt Plan(s) for new hunts	Within 3 years of CCP completion

Document continues on next page.